

## Claims

- [c1] 1. An organic electroluminescent device, comprising:
  - a transparent substrate;
  - a plurality of pixels disposed on the transparent substrate, wherein the pixels comprise a plurality of red-light pixels, a plurality of green-light pixels and a plurality of blue-light pixels;
  - a red-light detector disposed adjacent to the red-light pixels on the transparent substrate;
  - a green-light detector disposed adjacent to the green-light pixels on the transparent substrate; and
  - a blue-light detector disposed adjacent to the blue-light pixels on the transparent substrate.
- [c2] 2. The organic electroluminescent device of claim 1, wherein each pixel comprises, in sequence, a transparent anode, an organic electroluminescent layer and a metal cathode.
- [c3] 3. The organic electroluminescent device of claim 2, wherein the transparent anode comprises indium-tin oxide or indium-zinc oxide.
- [c4] 4. The organic electroluminescent device of claim 2,

wherein the organic electroluminescent layer is made of-  
small molecular organic electroluminescent material or  
polymer electroluminescent material.

- [c5] 5. The organic electroluminescent device of claim 2,  
wherein the metal cathode comprises aluminum, alu-  
minum/lithium fluorine, calcium, magnesium/silver alloy  
or silver.
- [c6] 6. The organic electroluminescent device of claim 1,  
wherein each of the red-light detector, the green-light  
detector and the blue-light detector comprises, in se-  
quence, a metal anode, a electroluminescent layer and a  
metal cathode.
- [c7] 7. The organic electroluminescent device of claim 6,  
wherein the metal anode comprises a non-transparent  
metal layer.
- [c8] 8. The organic electroluminescent device of claim 6,  
wherein the electroluminescent layer comprises an or-  
ganic material or an inorganic material.
- [c9] 9. The organic electroluminescent device of claim 6,  
wherein the metal anode has the same or different mate-  
rial of the metal cathode.
- [c10] 10. The organic electroluminescent device of claim 1,

further comprising a light guider coupled to each of the pixels transmitting the light within the device to the corresponding detector.

- [c11] 11. The organic electroluminescent device of claim 1, further comprising a driving unit coupled to each of the pixels, and each of the red-light detector, the green-light detector and the blue-light detector coupled to transfer units.
- [c12] 12. The organic electroluminescent device of claim 11, wherein the driving unit and the transfer units are coupled to a control unit.
- [c13] 13. A method for fabricating an organic electroluminescent device, comprising:
  - providing a transparent substrate;
  - forming a plurality of pixels on the transparent substrate, wherein the pixels comprise a plurality of red-light pixels, a plurality of green-light pixels and a plurality of blue-light pixels;
  - forming a red-light detector adjacent to the red-light pixels on the transparent substrate;
  - forming a green-light detector adjacent to the green-light pixels on the transparent substrate; and
  - forming a blue-light detector adjacent to the blue-light pixels on the transparent substrate.

[c14] 14. The method for fabricating an organic electroluminescent device of claim 13, the step of forming the pixels, the red-light detector, the green-light detector and the blue-light detector comprises:

forming a patterned transparent anode and a patterned metal anode on the transparent substrate;

forming an organic electroluminescent layer on the transparent anode and a electroluminescent layer on the metal anode respectively; and

forming a metal cathode on the organic electroluminescent layer and the electroluminescent layer respectively.

[c15] 15. The method for fabricating an organic electroluminescent device of claim 14, wherein the anode comprises indium-tin oxide or indium-zinc oxide.

[c16] 16. The method for fabricating an organic electroluminescent device of claim 14, wherein the metal anode comprises a non-transparent metal layer.

[c17] 17. The method for fabricating an organic electroluminescent device of claim 14, wherein the electroluminescent layer comprises an organic material or an inorganic material.

[c18] 18. The method for fabricating an organic electroluminescent device of claim 14, wherein the organic electro-

luminescent layer is made of small molecular organic electroluminescent material or polymer electroluminescent material.

- [c19] 19. The method for fabricating an organic electroluminescent device of claim 14, wherein the metal anode has the same or different material of the metal cathode.
- [c20] 20. The method for fabricating an organic electroluminescent device of claim 14, wherein the metal cathode comprises aluminum, aluminum/lithium fluorine, calcium, magnesium/silver alloy or silver.